

**ABSTRACT****TREATMENT FOR DIABETES**

5           Methods and compositions for treating diabetes mellitus in a patient in need thereof  
are provided. The methods include administering to a patient a composition providing a  
gastrin/CCK receptor ligand, e.g., a gastrin, and/or an epidermal growth factor (EGF) receptor  
ligand, e.g., TGF- $\alpha$ , in an amount sufficient to effect differentiation of pancreatic islet  
precursor cells to mature insulin-secreting cells. The composition can be administered  
10           systemically or expressed *in situ* by cells transgenically supplemented with one or both of a  
gastrin/CCK receptor ligand gene, e.g., a preprogastrin peptide precursor gene and an EGF  
receptor ligand gene, e.g., a TGF- $\alpha$  gene. The methods also include transplanting into a  
patient cultured pancreatic islets in which mature insulin-secreting beta cells are proliferated  
by exposure to a gastrin/CCK receptor ligand and an EGF receptor ligand.